<u>ABSTRACT</u>

[0062] A method and system for endpoint detection during an etch process is disclosed. The endpoint of the etch process is determined using a predetermined metric associated with the direct measurement of the intensity of radiation reflected from the layer being etched at a pre-selected wavelength. By using a direct measurement of the intensity, the layer being etched can have a thickness on the order of the wavelength of the light used for detection. As such, the present invention finds use in etching very thin, high K dielectric materials such as hafnium dioxide, hafnium silicate and the like.